

COASTAL ZONE MANAGEMENT ACT CONSISTENCY DETERMINATION
Southwest Washington Littoral Drift Restoration (Benson Beach),
Regional Sediment Management Demonstration
PACIFIC COUNTY, WASHINGTON

Introduction

The U.S. Army Corps of Engineers, Portland District, proposes to place sand directly onto Benson Beach to offset beach erosion and to supply sand to the littoral drift system (ocean currents running along the shoreline) which moves sand along the Long Beach peninsula. The source of material for the proposed work will most likely be the Federal navigation channel within the Mouth of the Columbia River (MCR). The effects of dredging the MCR and disposal at other approved sites are not addressed in this Coastal Zone Management Act (CZMA) Consistency Determination because those activities have been addressed in previous CZMA determinations. This CZMA Consistency Determination and all associated environmental documents describe two options for dredge material placement that could be conducted. The decision of which placement method will be used will be dependent on congressional authorities, funding levels, and sources of funding obtained for these actions.

Proposed Actions

The demonstration activity would be conducted concurrently with the Corps' dredging and disposal operations at the MCR, which typically occur annually between June 1st and November 1st. Both disposal options considered in this document propose placement of material on Benson Beach within the intertidal zone which would not start until after July 15th to minimize impacts to salmonids. Disposal Option 1, the direct pump ashore method would be completed before November 1st, the end of the dredging season. Disposal Option 2, which calls for the excavation of a sump in the area south of the north jetty, would require that the work take place before September 15th each year due to concerns with age 1+ Dungeness crabs migrating through the sump area after that date. In order to determine the best long term strategy, environmental clearances are being requested that would have a 5-year horizon (up to 1,000,000 cubic yards placed annually on Benson Beach) as well as address two options for pipeline placement of material into the littoral drift system. The quantity of material to be placed within the intertidal site is currently unknown but would most likely be substantially less than the 1,000,000 cubic yards annual maximum.

Disposal Option 1 – Direct Pump Ashore

Sand would be dredged from the Federal Navigation Channel within the MCR using a contract hopper dredge. The dredge would then be maneuvered near the south side of the north jetty and the sediment would be pumped north through a 16- to 30-inch pipe onto Benson Beach. The disposal pipe would extend for several thousand feet from the dredge, across the north jetty, and along the beach parallel to the shore.

Dredged material (>98% sand) from the MCR would be placed directly into the intertidal zone between +14 and -10 Mean Lower Low Water (MLLW) on Benson Beach (Figure 1). The area for placement of sand extends from approximately 1,500 ft north of the north jetty, to a point

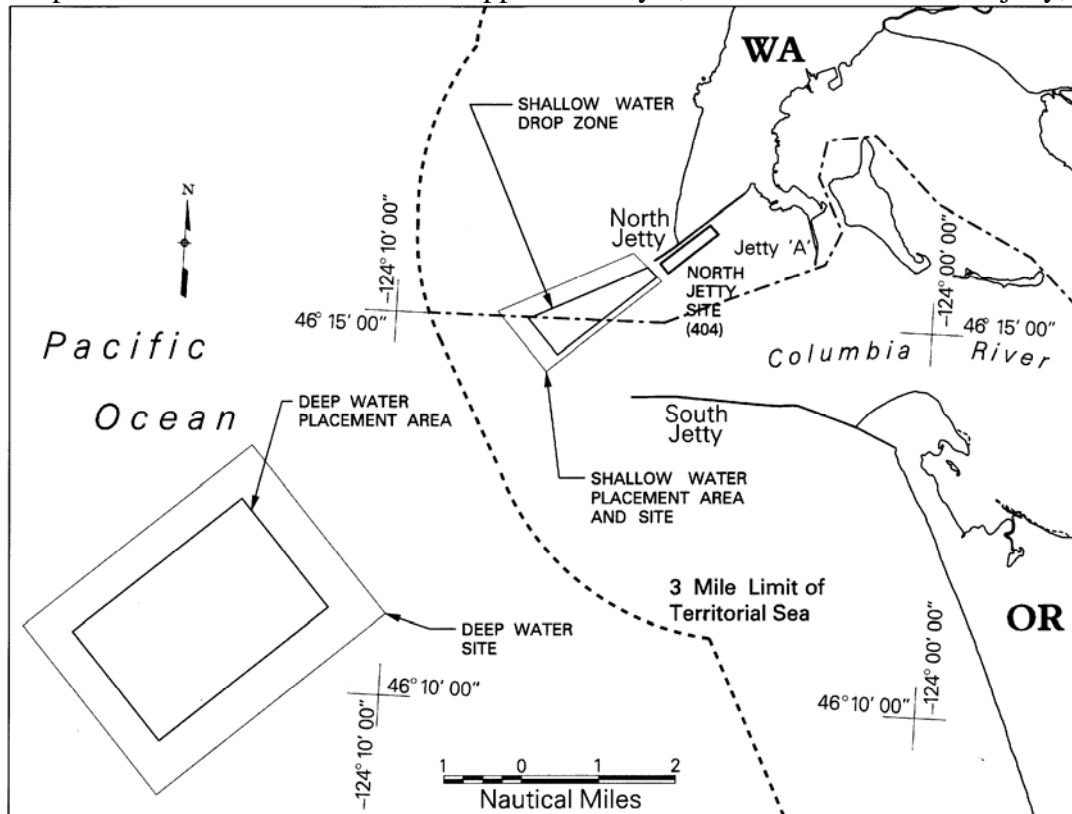


Figure 1. Vicinity map.

approximately 4,500 ft. north of the jetty (Figure 2). This Direct Pump Ashore option could provide up to 700,000 cubic yards of material per year before the present MCR dredging operation would be adversely impacted by increased cost and/or requiring additional dredging equipment, or impacting the extent of maintenance dredging that can be accomplished within the allowable time.

The material would be placed along the shore in parallel “strips” measuring approximately 150 ft (x-shore) by 2,000 ft. (along-shore). The strips would be placed beginning at the southern end and moving to the north by incrementally extending the pipeline. The process would then be repeated until all the material has been placed. The pipeline route would extend along the edge of the upper beach scarp, or below the seaward edge of the vegetation in areas where there is no scarp, to the point of deposition. The pipeline may be buried in some locations to minimize risks to beach users. Up to 3-feet of elevation for the pipeline may be required, and the material used to support the elevated pipe would be obtained by re-working material from the beach area prior to the initiation of the disposal activity. Large earth-moving equipment will be used to move some of the disposal material in order to limit the vertical accumulation on the beach and achieve the desired placement template. The constructed profile will be relatively flat with a front slope on the order of 20:1 from approximately +14 to -10 ft MLLW (Figures 1-2).

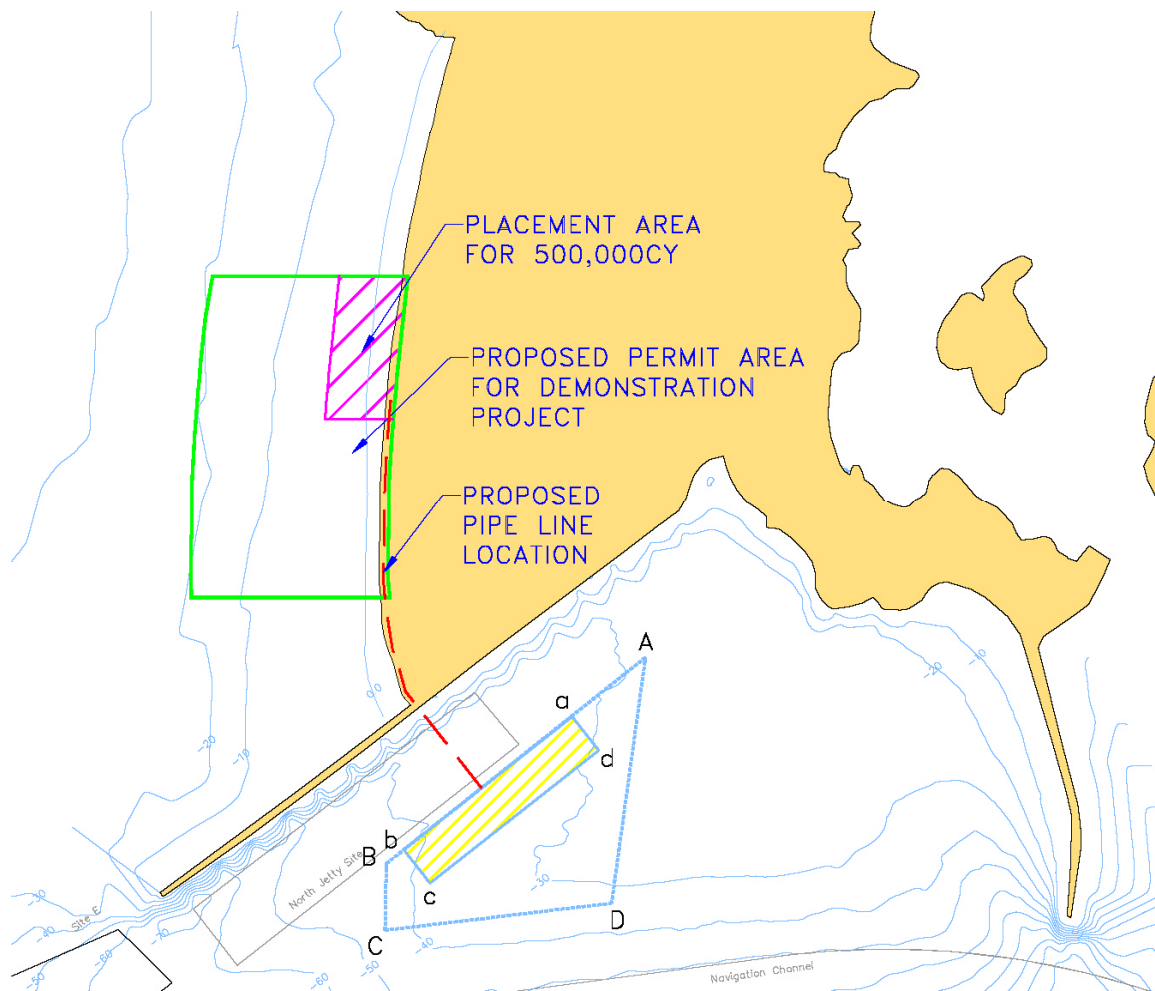


Figure 2. Plan view – Benson Beach placement area.

After the discharge event, as the newly deposited surface substrate is dispersed by wind, waves, and currents, the disposal sand it will quickly become saturated and compacted like the substrate typically found in the Benson Beach area.

Disposal Option 2 - Sump and Pump Ashore

This alternative would involve the removal of approximately 500,000 cubic yards of sand from the seabed at an area south of the north jetty and north of the MCR channel. The sediment would be removed by a cutterhead pipeline dredge to form a depression (sump) on the present seabed. The pipeline dredge would hydraulically discharge the dredged material (sand) within the intertidal zone of Benson Beach, between MHHW and MLLW as described above. The actual volume of material to be re-handled will depend on placement authority, available funds and the actual construction bids. For the sump area, a sump zone has been defined by considering navigation and operations, aquatic species and habitats, and sump and jetty stability. The identified sump zone and a potential sump location are shown in Figure 2. The potential sump footprint measures 3,000 ft x 600 ft; the depth of the sump will be limited by the choice of

dredging equipment and the desired volume of material from a given footprint, and is expected to be no more than 10 to 15 feet deeper than the current bottom depth of 35 to 40 feet. The sump would initially be cut with a vertical side slope. However, it is anticipated that the sump side slopes would adjust to a slope of 1v:5h due to slumping and infilling from the adjacent perimeter. The sump would be a continuous area (not several separate excavations) and would provide up to 1,000,000 cubic yards of dredged material.

Refilling of the sump will be achieved by bottom dumping from a Corps or contract hopper dredge. This refilling will be performed following the excavation of the sump and prior to the end of the dredging season. The timeframe for excavating the sump and placing the material will likely range from 1 to 2 months, depending on the equipment used and weather and wave conditions encountered during operations. During periods of bad weather, the pipeline dredge may need to be withdrawn from the sump area to the more sheltered area in the northeast corner south of the north jetty or to a location east of jetty A. It is likely that the pipeline dredge will be anchored to the seabed in the sump area using a four-point anchoring system.

Placement of the material from the sump onto Benson Beach will be the same as described above for the direct pump-ashore alternative except that the placement will be more continuous and subsequently for a shorter duration (fewer number of calendar days) and will not require the movement of the hopper dredge(s) back and forth from the MCR channel dredging location to the disposal pipe hook-up during the beach placement of sand. Refilling of the sump will require the hopper dredge to repeatedly place dredged material back into the sump. The placement of sand on Benson Beach will not be affected by the refilling of the sump.

Consistency Review

The Coastal Zone Management Act (CZMA) requires states to identify “Enforceable Policies.” Washington’s authorities and their implementing regulations contain the states Coastal Zone Management Program’s (CZMP) enforceable policies:

- The Shoreline Management Act (SMA)
- The Clean Water Act (CWA)
- The Clean Air Act (CAA)
- The State Environmental Policy Act (SEPA)
- The Energy Facility Site Evaluation Council law (EFSEC)
- The Ocean Resources Management Act (ORMA)
- Local Shoreline Master Programs

Shoreline Management Act, chapter 90.58 RCW

The Shoreline Management Act (“SMA”), chapter RCW 90.58 RCW is the core authority of Washington’s Coastal Zone Management Program.

State Policy

RCW 90.58.020 enunciates the following state policy:

- *To provide for the management of the shorelines of the state by planning for and fostering all reasonable and appropriate uses.*
- *To insure the development of shorelines in manner that promotes and enhances the public interest while allowing only limited reduction of rights of the public in the navigable waters.*
- *To protect against adverse effects to the public health, the land and its vegetation and wildlife, and the waters of the state and their aquatic life, while protecting generally public rights of navigation and corollary rights.*

The proposed activity is consistent with this broad statement of policy. In spite of temporary negative impacts to the beach where placement will occur, the activity is designed to improve the beach by preventing future erosion at Benson Beach and providing sand to the Littoral Drift System which will benefit of the public.

Shorelines of Statewide Significance

The SMA establishes use preferences for shorelines of state-wide significance. The proposed activity is consistent with the criteria for activities within shorelines of statewide significance as follows:

1. Recognize and protect the statewide interest over local interest.

The proposed work furthers the interests of the State of Washington and recognizes the statewide and regional interests as well as local interests in placing material into the littoral drift. As described in the attached Environmental Assessment (EA), the effects to fish and water quality, as a result of the activity, will be minimal.

2. Preserve the natural character of the shoreline and minimize man-made intrusions on shorelines.

The purpose of the demonstration is to provide sand to the littoral drift system. It will also help prevent future erosion at Benson Beach and add sand to the littoral drift system. Though a man-made intrusion, the objective of the activity is to offset impacts likely influenced or caused by historic man-made changes to the river, estuary, and ocean.

3. Plan for long term over short term benefit.

The purpose of the activity is to provide sand to Benson Beach and the littoral drift system of SW Washington which will provide both long- and short-term benefit for the local area and the region.

4. Protect the resource and ecology of the shoreline.

The environmental impacts associated with the proposed action are expected to be relatively minor because the work is being done in a high energy environment that is subject to waves, wind, ocean currents, tides, and fluctuating freshwater flow levels. The primary impacts will be caused by increased suspended sediment in the water column at the disposal sites. However, this impact is expected to stay within acceptable levels for fish and wildlife species of concern. Disturbed material would primarily be sand, which would settle quickly. Avoidance of the area may occur throughout the disposal activity as a result of the increased activities and noise. This impact is localized and all species would be expected to return following completion of the work each year. No significant effects on any listed/candidate threatened or endangered species are anticipated. The disposal activity will occur during appropriate in-water work periods determined by fishery agencies to minimize impacts to salmonids and Dungeness crab.

5. Increase public access to publicly owned areas of the shorelines.

The Benson Beach disposal will temporarily limit access to Benson Beach and the north jetty. The limited access may last for up to 1-2 months each year. Upon completion of the placement each year, all equipment will be removed and the disturbed area will be quickly become saturated and compacted like the substrate typically found in the Benson Beach area. The placement activity will not result in an increase in public access to Benson Beach.

6. Increase recreational opportunities for the public on the shorelines.

The Benson Beach disposal is not specifically designed to increase recreational opportunities for the public at Benson Beach, but if the demonstration succeeds in returning material to the littoral drift system in SW Washington, it could enhance recreational opportunities in the long-term.

General Use Preferences

RCW 90.58.020 also states that alterations of the natural condition of the shorelines of the state, in those limited instances when authorized, shall be given priority for single family residences and their appurtenant structures, port, shoreline recreations uses, and other improvement facilitating public access to shorelines of the state, industrial and commercial developments which are particularly dependent on their location on or use of the shorelines of the state.

The proposed activity does not conflict with this general use preference because there will be no permanent structures or development associated with the work. The purpose is to demonstrate and test one or two methods for adding sand to the littoral drift system of SW Washington. If the demonstration is successful, it would benefit the natural system and all users of the SW Washington coast.

The Clean Water Act

The Corps has submitted an application to Washington Department of Ecology for water quality certification.

Washington Air Quality Requirements

The proposed activity does not require an Air Quality Permit.

State Environmental Policy Act (SEPA)

The Corps has submitted the required documents to Pacific County, WA for SEPA compliance.

The Energy Facility Site Evaluation Council law (EFSEC)

The proposed activity does not require an EFSEC permit.

Ocean Resources Management Act, RCW chapter 43.143, WAC 173-16-064.

RCW 43.143.030 – Planning and review criteria

(1) When the state of Washington and local governments develop plans for the management, conservation, use, or development of natural resources in Washington's coastal waters, the policies in RCW [43.143.010](#) shall guide the decision-making process.

(2) Uses or activities that require federal, state, or local government permits or other approvals and that will adversely impact renewable resources, marine life, fishing, aquaculture, recreation, navigation, air or water quality, or other existing ocean or coastal uses, may be permitted only if the criteria below are met or exceeded:

(a) There is a demonstrated significant local, state, or national need for the proposed use or activity;

Since the 1990s, state and local interests have expressed interest in placing sand dredged from the MCR Federal navigation channel directly on Benson Beach to supply sand to the littoral system of Long Beach peninsula. The national benefit would be for beneficial use of dredged material which is a goal for all federal dredging. Sand that is placed on Benson Beach would not have to be transported to other disposal sites including the Deep Water Site which is 6 to 8 miles offshore. There is potential for savings of time and fuel by using a closer disposal site.

(b) There is no reasonable alternative to meet the public need for the proposed use or activity;

The attached Environmental Assessment provides an evaluation of 4 alternatives including a No-Action Alternative. The 2 proposed disposal options are considered to be the most reasonable methods for meeting the need for the sand in the littoral drift system at Benson Beach and SW Washington.

(c) There will be no likely long-term significant adverse impacts to coastal or marine resources or uses;

Though there will likely be some short-term adverse impacts to the coastal and marine resources at the disposal site and the sump (if that option is used), the overall effects of restoring

sand to the littoral drift system of SW Washington are expected to provide a long-term benefit for coastal and marine resources.

(d) All reasonable steps are taken to avoid and minimize adverse environmental impacts, with special protection provided for the marine life and resources of the Columbia River, Willapa Bay and Grays Harbor estuaries, and Olympic national park;

The disposal activity is timed to minimize impacts to the +1 Dungeness crab and salmonids that use the areas where the sump will be excavated (if that option is used) and the disposal site at Benson Beach. An Environmental Assessment (EA) was prepared to consider the impacts of the proposed activity. The EA can be found at the following web site:

<https://www.nwp.usace.army.mil/op/n/s/mcr/docs/BBeach%20Final%20EA120805.pdf>

(e) All reasonable steps are taken to avoid and minimize adverse social and economic impacts, including impacts on aquaculture, recreation, tourism, navigation, air quality, and recreational, commercial, and tribal fishing;

The proposed activity will temporarily impact recreation at the Benson Beach disposal site by preventing public access to the area while the disposal pipeline is in place. The pipeline will be removed as quickly as possible after the disposal to minimize the impacts to recreation. The timing of the activity is designed to minimize adverse impacts to salmonids and Dungeness crabs in the MCR. The activity of the dredge at the sump site may impact recreational and commercial fishing in the immediate vicinity of the dredge. However, the dredge will be present only intermittently and alternative fishing sites are available at all times.

(f) Compensation is provided to mitigate adverse impacts to coastal resources or uses;

Upon completion of the construction work, the area is expected to be quickly restored to its preexisting condition. The overall goal of the demonstration, to provide sand to the littoral drift system, if successful, will compensate for the temporary adverse impacts to coastal resources.

(g) Plans and sufficient performance bonding are provided to ensure that the site will be rehabilitated after the use or activity is completed; and

Upon completion of the disposal activity each year, all equipment will be removed from the beach and the disturbed area is expected to quickly become saturated and compacted like the substrate typically found in the Benson Beach area.

(h) The use or activity complies with all applicable local, state, and federal laws and regulations.

The disposal activity complies with applicable local, state and federal laws.

Pacific County Shoreline Master Program

The Federal Coastal Zone Management Act requires Federal activities that may affect coastal resources or uses be evaluated for consistency with relevant local Shoreline Master Programs. The Pacific County Shoreline Master Program includes a number of provisions that implement the Washington Ocean Resources Management Act. The Pacific County SMP provisions reviewed below.

Section 3 – Introduction to Policies and Regulations

B. Shoreline Policies

The guidance states in part “The shoreline policies that follow have been crafted to recognize these unique and valuable shoreline resources and to protect them for benefit of future generations. These policies are intended to be consistent with the Shoreline Management Act, Chapter 90.58 RCW.” In particular, it states that policies should “*Encourage the design and use of naturally regenerating systems and/or constructed engineering solutions for prevention and control of beach erosion where:*

- i. The length and configuration of the beach will accommodate such systems; and*
- ii. Such protection is a reasonable solution to the needs of the specific site.*

As stated above, under state policy the proposed activity is consistent with this statement of policy as described in RCW 90.58. As detailed under the discussion of Shorelines of Statewide Significance (see page 4), the proposed activity is designed to enhance the shoreline of SW Washington.

Section 12 – Roads

B. Conservancy Environment

2.a. A permit for road construction or expansion may be granted subject to the following regulations: Demonstration of compliance with any federal or state permits, as required, by presentation of a copy of each permit or by any other means satisfactory to the Administrator.

No road construction will be required for the proposed activity.

b. Filling of tidelands or tidal marshes to provide for a road right-of-way is permitted where there are no alternative routes which are economically or topographically feasible.

No tidelands, marshes, or wetlands will be filled to provide access to the proposed project. The pipeline will be placed along the shoreline during construction but will be removed upon completion of the disposal activity.

Section 15 – Shoreline Works and Structures

B. Conservancy Environment

1. SWS are permitted on conservancy shorelines where they do not substantially change the character of the environment and where they are a necessary part of a which is clearly dependent on a location near or adjacent to a body of water.

The work will not substantially change the character of the environment. The demonstration goals require the placement of sand on or in the vicinity of Benson Beach.

2. SWS allowed under Subsection 15.B.1 shall comply with all applicable standards and regulation given under Subsection 15.C.2.

The proposed activity will comply with *Subsection 15.C.2.* by conforming to the standards specified in all Federal and State permits required for this action.

Section 16 – Landfill and Dredging

B. Conservancy Environment

1. Dredging operation or landfills shall be prohibited on tidal wetlands.

The proposed activity will not involve dredging or disposal of fill material into tidal wetlands.

2. Dredging operations or landfills allowed under Subsection 16.B.1. shall comply with all applicable standards and regulations given under Subsections 16.D.2. and 16.D.3.

The proposed dredging and landfill operations are designed to protect and preserve the character of the coastal environment by providing sand to the littoral drift system along SW Washington beaches.

16.D.2 states: All dredging or spoil disposal projects shall be subject to the following regulations:

a. Dredging operations shall conform to the operating standards on any federal and state permits required for such operations. Operations not requiring federal or state permits shall have similar standards imposed as conditions of obtaining a permit.

b. Dredge spoils exceeding the Environmental Protection Agency criteria for toxic sediments shall be disposed of on land. The results of chemical and physical analysis of the spoil material shall be forwarded to the Administrator prior to the beginning of dredging operations.

c. Dredge spoils disposed of on land shall be placed only in areas within existing diked lands protected from flooding by tidegates, identified as disposal sites on the shoreline map or on a permit granted for a specific disposal operation. Disposal sites shall be selected to minimize detrimental effects on the shoreline environment. In particular, the area of productive wetlands affected shall be kept to a minimum in the selection of suitable disposal sites.

d. Disposal sites which have been completely filled shall be drained, tilled and planted by the second growing season following filling, if possible, unless specific plans for other uses of the filled land are submitted to the Administrator within one year of filling.

The proposed activity requires a state WQ Certificate and also must meet all NEPA, CZMA, and ESA requirements. Based on past sediment testing results in 2000, the material meets in-water disposal criteria and is not expected to require upland disposal. No wetlands will be impacted by the activity and the disposal site will not be diked since erosion of the dredge material is the desired outcome. The disposal material will be placed in the surf zone and lower beach where no vegetation will be impacted.

16.D.3 states: All landfills shall be subject to the following standards and regulations:

a. The “Criteria Governing the Design of . . . Landfills . . . for Protection of Fish and Shellfish Resources” adopted by the Washington State Department of Fish and Wildlife and applied to that region of the state which includes Pacific County, which criteria are incorporated herein by reference, shall be complied with.

b. Landfills shall consist of clean materials with a minimum potential for degrading water quality.

c. Landfills shall be protected against erosion with retaining walls or similar structures or by vegetation established, if possible, during the first growing season following completion of the landfill.

d. Filling in associated wetlands or waterward of the ordinary high water mark to provide for soil absorption systems (drainfields) or for the purpose of meeting setback requirements shall be prohibited. Except, that on existing dry uplands fill may be placed for the purpose of constructing a mound system, as required by local health regulations.

Where possible, the proposed disposal activity will comply with the conditions listed above. Because erosion of the Benson Beach disposal material is desired, there will be no attempt to protect against erosion as stated above. There will be no discharge of material into wetlands or water-ward of the OHWM to provide drain fields or setback requirements.

Section 18 – Recreation

Except for those facilities which require a location adjacent to a body of water, setback and height regulations on all shorelines for recreational facilities shall correspond to those for single-family residences.

The proposed demonstration activity requires the temporary placement of a disposal pipeline on Benson Beach. The pipeline is the only structure that will be present and it will only be on site temporarily (from 1-2 months). The area surrounding the disposal pipe will be fenced to prevent public access which will prevent recreational use of the area for the 1- to 2-month period that the activity is on-going.

Section 19 – Flood Plains

B. In determining the appropriateness of any proposed use in a flood hazard area, the following shall be considered:

1. The danger to life and property due to increase flood heights or velocities caused by encroachments.

The proposed activity will not increase flood heights or velocities.

2. The danger that materials may be swept on to other lands or downstream to the injury of others.

Much of the sand deposited on Benson Beach is expected to be swept away by currents along the SW Washington coast. That is the primary purpose of the demonstration activity. This movement of sand will not cause injury to people or property down-current from the placement site.

3. The proposed water supply and sanitation systems and the ability of these systems to prevent disease, contamination and unsanitary conditions.

There will be no impact to any water supply or sanitation systems.

4. The susceptibility of the proposed use and its contents to flood damage and the effect of such damage on the individual owner.

The proposed activity is not susceptible to flood damage.

5. The importance of the services provided by the proposed use to the community.

The proposed activity will not provide services to the community, but will likely help prevent erosion at Benson Beach and provide sand to the Littoral Drift System.

6. The requirements of the use for a waterfront location.

As stated above, the activity is completely water-dependent. Coastal processes at work in the SW Washington littoral drift system and other environmental considerations make the on-shore disposal option more desirable than the other alternatives considered in the Environmental Assessment. The goals of the demonstration activity make it location-dependent also.

7. The availability of alternative locations not subject to flooding for the proposed use.

Alternatives to the proposed placement activity were discussed and ruled out in the Environmental Assessment prepared for this activity. None of the alternatives considered, including the disposal options discussed in this document are subject to flooding.

8. The compatibility of the proposed use with existing development and development anticipated in the foreseeable future.

The disposal location is on Benson Beach on Federally- and State-owned property where there is no development and no foreseeable future development.

9. The safety of access to the property in times of flood for ordinary and emergency vehicles.

The disposal site on Benson Beach will not be accessible to the public or ordinary and emergency vehicles while the disposal pipeline is in place. There will be no impact to beach access after the pipeline has been removed.

10. The expected heights, velocity, duration, rate of rise and sediment transport of the floodwaters expected at the site.

There are no floodwaters expected at this site.

11. The costs of providing governmental services during and after flood conditions including maintenance and repair of public utilities such as sewer, gas, electrical and water systems, and streets and bridges.

There are no public utilities in the disposal area.

12. Such other factors which are relevant to the policy of this Master Program.
The proposed activity is in compliance with the policy of the Pacific County Master Program.

Section 21 – Dunes

All work will be seaward of the dune line. No vegetation or dunes will be impacted.

Section 23 – Columbia River Estuary Segment

D. Use and Activity Regulations: Tables 1 and 2 of the PCSMP list the permitted uses and activities within the seven management designations created within Subsection 25.B.1 through Subsection 25.B.8. The following uses and activities listed under Tables 1 and 2 apply to this project:

Table 1 – Conservation/Aquatic Areas

Low intensity and water dependent uses and activities are permitted. The proposed activity fits this “low intensity and water dependent” category. The dredging and disposal activities proposed are part of a restoration demonstration and as such meet the requirements of subsections 23.F.22, 23.F.23, and 23.F.25 except that no dikes will be used to control runoff. Because the primary purpose of the demonstration is to feed the littoral drift system, dikes to control surface runoff would be counterproductive to the purpose.

Table 2 – Conservation/Shoreline Areas

The disposal is a temporary fill activity which will, by design, erode and compact with exposure to the elements (wind, waves, rain, ocean currents, tides, etc.) to create a beach with the same characteristics as found pre-disposal. It is hoped that the amount of beach area will increase, but the demonstration activity is primarily aimed at restoring sand to the SW Washington littoral drift system.

Impact Assessment

In addition to the impact assessments provided herein, an Environmental Assessment (EA) was prepared to consider the impacts of the proposed activity. The EA can be found at the following web site:

<https://www.nwp.usace.army.mil/op/n/s/mcr/docs/BBeach%20Final%20EA120805.pdf>

Statement of Consistency

Based on the above evaluation, we have determined that the action proposed in the *Draft Environmental Assessment for the Southwest Washington Littoral Drift Restoration Regional Sediment Management Demonstration* are consistent with the enforceable policies of the approved coastal zone management programs of Washington, including the enforceable policies as specified in the local planning documents for Pacific County that are incorporated in the approved programs. The action is, therefore, consistent with the State of Washington's Coastal Zone Management Program to the maximum extent practicable.